REMARKS

SUMMARY

Reconsideration of the application is respectfully requested.

Claims 1 and 14 have been amended.

Previously unnumbered claims following claim 19 has been numbered as claim 20.

Previously numbered claims 20-28 have been renumbered as claims 21-29, and withdrawn.

No new matter has been introduced.

Accordingly, claims 1-20 remain pending.

DRAWINGS

The present Office Action does not indicate whether or not the drawings filed on March 22, 2004 have been accepted or objected to. Applicant respectfully requests clarification.

CLAIM NUMBERING UNDER 37 CFR 1.126

The present Office Action correctly identifies an informality with regard to un-numbered claim 20. Applicant agrees with Examiner Walberg that the un-numbered claim should be identified as claim 20 and that originally numbered claims 20-28 should be renumbered as claims 21-29 for purposes of examination. Accordingly, Applicant has amended the above identified claims with the revised numbering. All further reference to claims in this response shall be made according to the revised numbering.

RESTRICTION UNDER 35 U.S.C. 121

Applicant confirms that during a telephone conversation initiated by Examiner Emily Chan with attorney Al AuYeung on January 5, 2005, a provision election was made without traverse to prosecute the invention of Group I, claims 1-20. Accordingly, Group II claims, 21-29, are withdrawn. Applicant hereby further reserves the right to pursue the non-elected claims via divisional application.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

Claims 1, 7, 9, and 14 stand rejected under 35 USC § 102(b) for being as being unpatentable in view of U.S. Patent No. 2,362,911 to Litton. ("Litton"). In response, Applicant has amended claim 1 to clearly recite that

"the second circumfluent channel being reflexively disposed relative to the first circumfluent channel with the two circumfluent channels crossing each other at least once, the second inlet being proximally disposed relative to the first inlet and having a first relative disposition relationship, and the second outlet being proximally disposed relative to the first outlet and having a second relative disposition relationship that is a reflection of the first relative disposition relationship"

In contrast, Litton merely teaches of outer layer tubes 96 winding helixically from upper inlet header 97 to lower outlet header 99, and inner layer tubes 95 winding hexlically from upper inlet header 101 to lower outlet header 102, in parallel to outer layer tubes 96. Tubes 96 and 95 never cross each other. Outlet header 102 is disposed "inside" of outlet header 99, just like inlet header 101 is disposed "inside" of inlet header 97, and the relative disposition relationship is not a reflection of each other.

Accordingly, Litton's helixical tubes do not anticipate the required reflexive circumfluent channels of claim 1.

Therefore, claim 1 is patentable over Litton under 35 USC § 102(b).

Claim 14 contains in substance limitations that are similar to claim 1. Claim 14 is therefore also patentable over Litton under 35 USC § 102(b) for at least the same reasons as claim 1.

Claims 7 and 9 each depend from independent claim 1 incorporating its corresponding limitations. Thus, for at least the above stated reasons, claims 7 and 9 are patentable over Litton under 35 USC § 102(b).

Claims 1, 2, 7, 10, 14, and 16 stand rejected under 35 USC § 102(b) for being as being unpatentable in view of U.S. Patent No. 5,200,232 to Tappan et al. ("Tappan"). Applicant respectfully traverses.

Tappan merely teaches of what is clearly a single serpentine channel (39), flowing from a single inlet (36) to a single outlet (37). Applicant respectfully disagrees that the portions of the single serpentine channel 39 prior to, and after the U-turn point can be considered as two channels (outer and inner, respectively), with the left and right portions of the U-turn point considered the "outlet" and "inlet" of the "outer" and "inner" channels respectively.

Even if we are to ignore that, nonetheless, Tappan's alleged "outer" and "inner" channels never cross each other. Their "inlets" are not proximally disposed to each other. Likewise, the "outlets" are not proximally disposed to each other. Further, the "outlet" of the alleged "outer" channel is disposed outside to the "outlet" of the alleged "inner" channel, just like the "inlet" of the alleged "outer" channel is disposed outside to the "inlet" of the alleged "inner" channel, and the relative disposition relationships are not a reflection of each other.

Accordingly, Tappan's channel 39 does not anticipate the required reflexive circumfluent channels of claim 1.

Therefore, claim 1 is patentable over Tappan under 35 USC § 102(b).

Claim 14 contains in substance limitations that are similar to claim 1. Claim 14 is therefore also patentable over Tappan under 35 USC § 102(b) for at least the same reasons as claim 1.

Claims 2, 7, 10, and 16 depend on independent claims 1 or 14, incorporating their corresponding limitations. Thus, for at least the above stated reasons, claims 2, 7, 10, and 16 are patentable over Tappan under 35 USC § 102(b).

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 4-6, 13, 15, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Litton in view of U.S. Patent No. 6,053, 238 to Goth *et al* ("Goth"). Goth fails to remedy the above discussed deficiencies of Litton. Accordingly, claims 1 and 14 remain patentable over Litton even when combined with Goth.

Claims 4-6, 13, 15, and 19 each depend from either claim 1 or 14, incorporating their recitations, respectively. Therefore, for at least the same reasons, claims 4-6, 13, 15, and 19 are not obvious and are patentable over the combination of Litton and Goth.

Claims 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the reference Litton. As discussed above, claim 1 is patentable over Litton under § 102(b). Applicant submits claim 1 is also patentable over Litton under § 103(a), as one of ordinary skill in the art is unable to arrive at the claimed invention in view of Litton.

Claims 8-10 depend on claim 1, incorporating its recitations. Therefore, for at least the same reasons, claims 8-10 are not obvious and are patentable over Litton.

Claims 11, 12, 17, and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tappan in view of U.S. Patent No. 6,058,010 to Schmidt *et al* ("Schmidt"). Schmidt fails to remedy the deficiencies of Tappan.

Schmidt fails to remedy the above discussed deficiencies of Litton. Accordingly, claims 1 and 14 remain patentable over Litton even when combined with Schmidt.

Claims 11, 12, 17 and 18, each depend from either claim 1 or 14, incorporating their recitations, respectively. Therefore, for at least the same reasons, claims 11, 12, 17 and 18 are not obvious and are patentable over the combination of Litton and Schmidt.

OBJECTION TO CLAIMS 3 AND 20

Claims 3 and 20 stand objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form. However, for the reasons stated above, Applicant respectfully asserts that the base claims (claim 1 and 14) are patentable and that claims 3 and 20 are therefore allowable as originally drafted. Therefore, Applicant respectfully requests that the objections to claims 3 and 20 be accordingly withdrawn.

CONCLUSION

In view of the foregoing, claims 1-20 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,
SCHWABE, WILLIAMSON & WYATT, P.C.

Date: July 20, 2005 by: _____
Al AuYeung
Reg. No.: 35,432

Schwabe, Williamson & Wyatt, P.C.
Pacwest Center, Suites 1600-1900
1211 SW Fifth Avenue
Portland, Oregon 97222
Telephone: 503-222-9981